

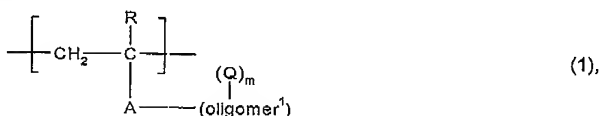
CASE No. CL/V-31855A/CVA

## CLAIM AMENDMENTS

Please cancel claims 15-17 and amend claim 5 as follows.

1-3. (Cancelled currently)

1. (Amended previously) A process for coating a material surface comprising the steps of:  
 (a) applying to the material surface at least one comb-type polymers comprising a polymer backbone and side chains pendently attached thereto, wherein at least a part of the side chains carry a triggerable precursor for carbene or nitrene formation, wherein the comb-type polymer comprises units of formula

wherein R is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl,

A is a radical of formula

- C(O) - X - (2a),
- C(O) - O - (CH<sub>2</sub>)<sub>r</sub> - CH(OH) - CH<sub>2</sub> - X - (2b),
- C(O) - NH - (alk') - C(O) - X - (2c),
- C(O) - O - (alk'') - NH - C(O) - X - (2d),
- C(O) - X - (alk'') - X<sub>1</sub> - C(O) - (2e),
- C(O) - NH - C(O) - X - (2f),
- (alk'')<sub>s</sub> - X - D - X<sub>1</sub> - (2g),
- X - (alk') - X<sub>1</sub> - (2h),
- X - C(O) - (2i),
- (alk'') - C(O) - X - (2j) or
- (alk'') - X - C(O) - (2k),

wherein (alk') is C<sub>1</sub>-C<sub>6</sub>-alkylene, (alk'') is C<sub>2</sub>-C<sub>12</sub>-alkylene, (alk''') is C<sub>1</sub>-C<sub>6</sub>-alkylene, D is a group -C(O)- or -C(S)- and s is 0 or 1,X and X<sub>1</sub> are each independently a group -O- or -NR<sub>1</sub>-, wherein R<sub>1</sub> is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl, (oligomer)<sup>1</sup> is the radical of

(i) a hydrophilic telomer which is derived from one or more different copolymerizable vinyl monomers,

(ii) the radical of an oligosaccharide,

(iii) the radical of an oligopeptide, or

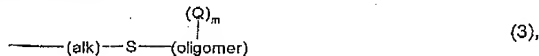
(iv) the radical of a polyalkylene oxide,

Q is a radical comprising a triggerable precursor for carbene or nitrene formation,

r is an integer from 1 to 4; and m is an integer ≥ 1;

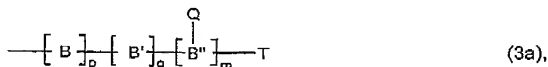
(b) fixing the polymer(s) onto the material surface using UV or visible light.

2. (Amended currently) A process according to claim 1, wherein the radical -(oligomer)<sup>1</sup>-(Q)<sub>m</sub> corresponds to a radical of formula

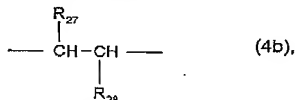
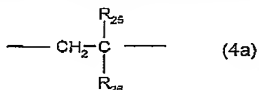


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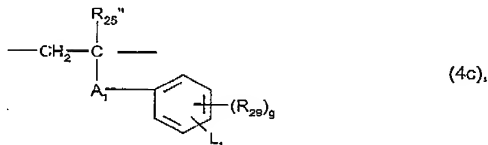
wherein (alk) is C<sub>2</sub>-C<sub>6</sub>-alkylene and (oligomer)-(Q)<sub>m</sub> corresponds to formula



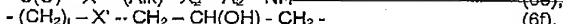
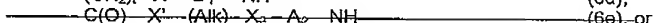
wherein B and B' are each independently of the other a radical of formula



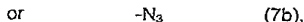
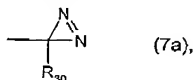
wherein R<sub>25</sub> is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl, R<sub>26</sub> is a hydrophilic substituent; R<sub>27</sub> is C<sub>1</sub>-C<sub>4</sub>-alkyl, phenyl or a radical -C(O)OY<sub>8</sub>, wherein Y<sub>8</sub> is hydrogen or unsubstituted or hydroxy-substituted C<sub>1</sub>-C<sub>4</sub>-alkyl; and R<sub>28</sub> is a radical -C(O)OY<sub>9</sub>' or -CH<sub>2</sub>-C(O)OY<sub>9</sub>' wherein Y<sub>9</sub>' independently has the meaning of Y<sub>8</sub>; B"-Q is a 1,2-ethylene radical of formula



wherein R<sub>25</sub>" is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl,  
A<sub>1</sub> is a linking member of formula



X' and X<sub>2</sub> are each independently a group -O- or -NR<sub>1</sub>-, R<sub>1</sub>' is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl; D<sub>1</sub> is a group -C(O)- or -C(S)-, (Alk) is C<sub>2</sub>-C<sub>12</sub>-alkylene, t is 0 or 1, R<sub>29</sub> is C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy, amino, hydroxy, sulfo, nitro, trifluoromethyl or halogen, g is an integer from 0 to 2, L<sub>1</sub> is a group of formula



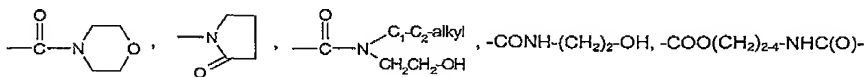
R<sub>30</sub> is fluorinated C<sub>1</sub>-C<sub>6</sub>-alkyl,

p and q are each independently of another an integer from 0 to 250, wherein the total of (p+q) is an integer from 2 to 250, m is an integer from 1 to 3, and

T is a monovalent group that is suitable to act as a polymerization chain-reaction terminator.

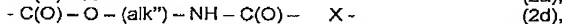
3. (Originally filed) A process according to claim 5, wherein B and B' are each independently a radical of formula (4a), R<sub>25</sub> is hydrogen or methyl, and R<sub>26</sub> is a radical -CONH<sub>2</sub>, -CON(CH<sub>3</sub>)<sub>2</sub>,

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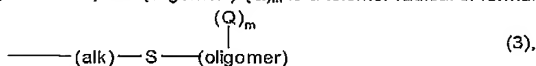


O-G, wherein -O-G is the radical of trehalose, -COOH, -NH<sub>2</sub>, -CH<sub>2</sub>-NH<sub>2</sub>, -CH<sub>2</sub>-N(CH<sub>3</sub>)<sub>2</sub>, -C(O)NH-(CH<sub>2</sub>)<sub>2,3</sub>-NH<sub>2</sub>, -C(O)O-(CH<sub>2</sub>)<sub>2,3</sub>-NH<sub>2</sub>, -COO-(CH<sub>2</sub>)<sub>2</sub>-N(CH<sub>3</sub>)<sub>2</sub> or -C(O)O-Ci<sub>4</sub>-CH(OH)-CH<sub>2</sub>-N(CH<sub>3</sub>)<sub>3</sub><sup>+</sup>An<sup>-</sup>, wherein An<sup>-</sup> is an anion.

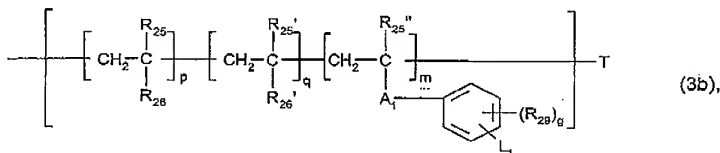
4. (Amended previously) A process according to claim 3, wherein in the polymer units of formula (1) R is hydrogen or methyl, A is a radical of formula



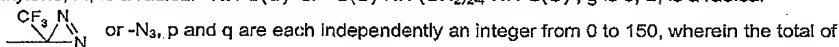
(alk') is C<sub>2</sub>-C<sub>4</sub>-alkylene; X is -NH-; and (oligomer')-(Q)<sub>m</sub> is a telomer radical of formula



wherein (alk) is C<sub>2</sub>-C<sub>4</sub>-alkylene and (oligomer)-(Q)<sub>m</sub> corresponds to formula

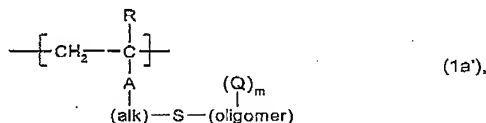


wherein R<sub>25</sub>, R<sub>25</sub>' and R<sub>25</sub>'' are each independently hydrogen or methyl, R<sub>26</sub> is a radical -CONH<sub>2</sub>, -CON(CH<sub>3</sub>)<sub>2</sub> or N-pyrrolidonyl, R<sub>26</sub>' is -NH<sub>2</sub> or -C(O)X'-(Alk)-NH<sub>2</sub>, X' is -O- or -NH-, (Alk) is C<sub>2</sub>-C<sub>3</sub>-alkylene, A<sub>1</sub> is a radical -NH-C(O)- or -C(O)-NH-(CH<sub>2</sub>)<sub>2,4</sub>-NH-C(O)-, g is 0, L<sub>1</sub> is a radical



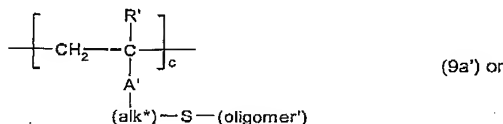
(p+q) is an integer from 2 to 150, m is an integer from 1 to 3, and T is a monovalent group that is suitable to act as a polymerization chain-reaction terminator.

5. (Amended previously) A process for coating a material surface, comprising the steps of:  
 (a) applying to the material surface at least one comb-type polymer comprising a polymer backbone and side chains pendently attached thereto, wherein at least a part of the side chains carry a triggerable precursor for carbene or nitrene formation, wherein the comb-type polymer is a polymer comprising units of formula



and optionally

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wherein R, R' and R<sub>26a</sub> are each independently hydrogen or methyl,  
 R<sub>26a</sub> is a radical -CONH<sub>2</sub>, -CON(CH<sub>3</sub>)<sub>2</sub> or N-pyrrolidonyl,  
 A and A' are each independently a radical of

- C(O) - X - (2a),
- C(O) - NH - (alk') - C(O) - X - (2c),
- C(O) - O - (alk'') - NH - C(O) - X - (2d),
- X - C(O) - (2i) or
- (alk''') - X - C(O) - (2k)

wherein X is a group -O- or -NH-,

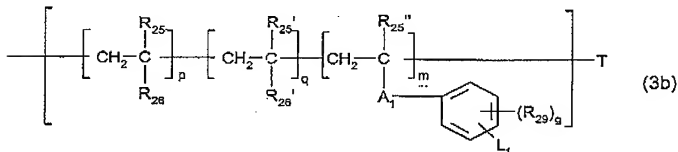
(alk'') is C<sub>2</sub>-C<sub>4</sub>-alkylene,

(alk') is a radical -CH<sub>2</sub>- or -C(CH<sub>3</sub>)<sub>2</sub>-,

(alk''') is C<sub>1</sub>-C<sub>2</sub>-alkylene,

(alk) and (alk\*) are each independently C<sub>2</sub>-C<sub>4</sub>-alkylene,

(oligomer)-(Q)<sub>m</sub> is a radical of formula



wherein R<sub>25</sub>, R<sub>25</sub>' and R<sub>25</sub>'' are each independently hydrogen or methyl, R<sub>26</sub> is a radical -CONH<sub>2</sub>, -CON(CH<sub>3</sub>)<sub>2</sub> or N-pyrrolidonyl, R<sub>26</sub>' is -NH<sub>2</sub> or -C(O)X'-(Alk)-NH<sub>2</sub>, X' is -O- or -NH-, (Alk) is C<sub>2</sub>-C<sub>3</sub>-alkylene, A<sub>1</sub> is a radical -NH-C(O)- or -C(O)-NH-

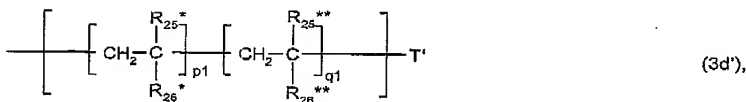
(CH<sub>2</sub>)<sub>2,4</sub>-NH-C(O)-, g is 0, L<sub>1</sub> is a radical

independently an integer from 0 to 150, wherein the total of (p+q) is an integer from 2 to 150, m is an integer from 1 to 3, and T is a monovalent group that is suitable to act as a polymerization chain-reaction terminator, and

(oligomer') is a radical of formula



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wherein  $\text{R}_{25}^*$  and  $\text{R}_{25}^{**}$  are each independently hydrogen or methyl,  $\text{R}_{26}^*$  and  $\text{R}_{26}^{**}$  are each independently a radical  $-\text{CONH}_2$ ,  $-\text{CON}(\text{CH}_3)_2$  or N-pyrrolidonyl,  $p1$  and  $q1$  are each independently an integer of from 0 to 150 and the total of  $(p1+q1)$  is an integer from 2 to 150, and  $\text{T}'$  is a monovalent group that is suitable to act as a polymerization chain-reaction terminator.

6,9. (Originally filed) A process according to claim 8, wherein the comb-type polymer according to step (a) essentially consists of units of formula (1a').

7 10. (Originally filed) A process according to claim 8, wherein the comb-type polymer according to step (a) essentially consists of units of formula (1a') and optionally (9a').

8 11. (Amended previously) A process according to claim 4, wherein the material surface to be coated is the surface of a contact lens, intraocular lens or artificial cornea.

9 12. (Amended previously) A composite material comprising  
 (i) an inorganic or organic bulk material; and  
 (ii) a hydrophilic surface coating obtained by the process according to claim 8.

13-14. (Cancelled previously)

15-17. (cancelled currently)

18. (Cancelled previously)